

WHAT IS CLAIMED IS:

1. An electrical connector housing comprising:
  - a power distributor panel comprising first and second sidewalls, and a printed circuit board with first and second faces; and
    - at least one unit comprising laminated busbars connected to a power source circuit,
    - said first face comprising conductors and at least one semiconductor switching element,
    - said second face comprising at least one busbar fixed thereto,
      - wherein said at least one busbar connects to a first connecting portion and said at least one unit connects to a second connecting portion, said first and second connecting portions being electrically connectable via a relay system.
2. The electrical connector housing according to claim 1, wherein said first connecting portion comprises at least one first tab connected to said busbar fixed to said second face of said printed circuit board and extending beyond said first sidewall of said power distributor panel.
3. The electrical connector housing according to claim 1, wherein said first connecting portion comprises at least one first tab welded to said conductors and extending beyond said first sidewall of said power distributor panel.
4. The electrical connector housing according to claim 2, wherein said second connecting portion comprises at least one second tab connected to said unit comprising laminated busbars.
5. The electrical connector housing according to claim 3, wherein said second connecting portion comprises at least one second tab connected to said unit comprising laminated busbars.
6. The electrical connector housing according to claim 4, wherein said electrical connector housing comprises a first shell including a fuse-receiving unit, and a second shell,
  - said relay system comprises a first relay terminal to connect with said second tab,
  - a relay busbar is connected at one end to said relay terminal and the other end forming at least one third tab, and
  - said first and third tabs are inserted in said fuse-receiving unit to electrically connect said first tab and said third tab by placing a fuse therebetween.

7. The electrical connector housing according to claim 5, wherein  
said electrical connector housing comprises a first shell including a fuse-receiving unit, and a second shell,  
said relay system comprises a first relay terminal to which said second tab is connected,  
a relay busbar is connected at one end to said relay terminal and the other end forming at least one third tab, and  
said first and third tabs are inserted in said fuse-receiving unit to electrically connect said first tab and said third tab by placing a fuse therebetween.
8. The electrical connector housing according to claim 4, wherein  
said relay system comprises a second relay terminal having first and second sections, and  
said first tab and said second tab being electrically connectable by engaging said first tab with said first section and said second tab with said second section, respectively.
9. The electrical connector housing according to claim 5, wherein  
said relay system comprises a second relay terminal having first and second sections, and  
said first tab and said second tab being electrically connectable by engaging said first tab with said first section and said second tab with said second section, respectively.
10. The electrical connector housing according to claim 8, wherein said first and second sections of said second relay terminal comprise a press-fit portion.
11. The electrical connector housing according to claim 9, wherein said first and second sections of said second relay terminal comprise a press-fit portion.
12. The electrical connector housing according to claim 8, wherein  
said electrical connector housing comprises a first shell and a second shell, said first shell comprises an internal face carrying a terminal-fixing unit, and said second relay terminal is fixed thereto.
13. The electrical connector housing according to claim 9, wherein  
said electrical connector housing comprises a first shell and a second shell, said first shell comprises an internal face carrying a terminal-fixing unit, and said second relay terminal is fixed thereto.
14. The electrical connector housing according to claim 6, wherein  
said housing comprises an axis along which said first shell and said second shell are superposed,

said power distributor panel has a substantially parallelepipedic shape and is arranged in the direction parallel to said axis, and

    said unit comprising laminated busbars has a substantially parallelepipedic shape and is arranged perpendicularly to said power distributor panel.

15.    The electrical connector housing according to claim 7, wherein

    said housing comprises an axis along which said first shell and said second shell are superposed,

    said power distributor panel has a substantially parallelepipedic shape and is arranged in the direction parallel to said axis, and

    said unit comprising laminated busbars has a substantially parallelepipedic shape and is arranged perpendicularly to said power distributor panel.

16.    The electrical connector housing according to claim 12, wherein

    said housing comprises an axis along which said first shell and said second shell are superposed,

    said power distributor panel has a substantially parallelepipedic shape and is arranged in the direction parallel to said axis, and

    said unit comprising laminated busbars has a substantially parallelepipedic shape and is arranged perpendicularly to said power distributor panel.

17.    The electrical connector housing according to claim 13, wherein

    said housing comprises an axis along which said first shell and said second shell are superposed,

    said power distributor panel has a substantially parallelepipedic shape and is arranged in the direction parallel to said axis, and

    said unit comprising laminated busbars has a substantially parallelepipedic shape and is arranged perpendicularly to said power distributor panel.

18.    A system for cabling a vehicle comprising an electrical connector housing comprising:

    a power distributor panel comprising first and second sidewalls and a printed circuit board with first and second faces; and

    at least one unit comprising laminated busbars connected to a power source circuit,

    said first face comprising conductors and at least one semiconductor switching element,

    said second face comprising at least one busbar fixed thereto,

wherein said at least one busbar connects to a first connecting portion and said at least one unit connects to a second connecting portion, said first and second connecting portions being electrically connectable via a relay system.

19. A method for cabling a vehicle comprising the steps of:

preparing an electrical connector housing comprising a power distributor panel including first and second sidewalls, and at least one unit comprising laminated busbars connected to a power source circuit;

providing said power distributor panel with a printed circuit board having first and second faces;

providing said first face with conductors and at least one semiconductor switching element,

providing said second face with at least one busbar fixed thereto; and

providing said at least one busbar with a first connecting portion and said at least one unit with a second connecting portion; whereby said first and second connecting portions are electrically connectable via a relay system.